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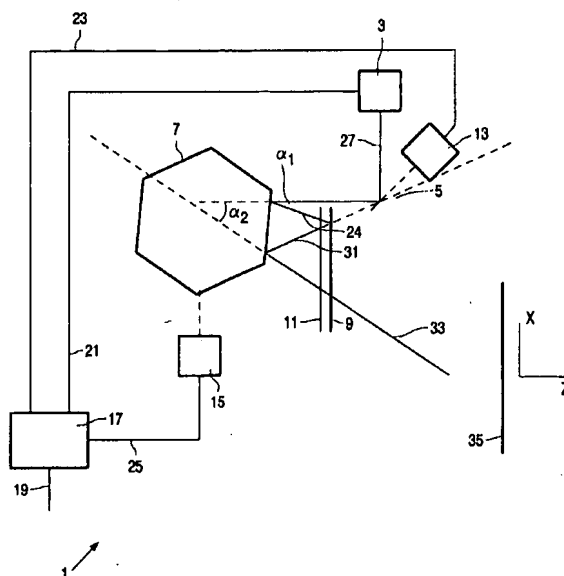
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Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,

[Continued on next page]

(54) Title: PROJECTION SYSTEM WITH SCANNING DEVICE



(57) Abstract: A projection system is described for displaying image information, comprising an illumination system for generating a light beam, a scanning device comprising a mirror for scanning the generated light beam to form an image on a screen, and a scan angle enlarger cooperating with the scanning device for enlarging a scan angle of the generated light beam. The scan angle enlarger comprises a reflective polarizer, a quarter-wave plate and a mirror arranged to reflect the light beam at least once between the reflective polarizer and the mirror via the quarter-wave plate. This arrangement allows a compact assembly of the projection system for use in small portable devices such as mobile phones and PDAs.



TJ, TM, TN, TR, TT, TŽ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2005/050970

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G02B26/12 G02B27/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 796 965 A (ISHIKAWA ET AL) 10 January 1989 (1989-01-10) abstract column 4, line 5 - line 27 figure 10	1,4,5, 9-12
A	-----	2,3
X	PATENT ABSTRACTS OF JAPAN vol. 010, no. 064 (P-436), 14 March 1986 (1986-03-14) -& JP 60 205419 A (FUJI SHASHIN FILM KK), 17 October 1985 (1985-10-17) abstract; figure 4	1,4,5, 9-13
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2005/050970

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/009048 A (THE UNIVERSITY OF READING; LETTINGTON, ALAN) 30 January 2003 (2003-01-30) page 7, line 1 - page 12, line 18 figures -----	1-5,9-13
A	HARRIGAN M: "DOUBLE REFLECTING POLYGON SCANNER" XEROX DISCLOSURE JOURNAL, XEROX CORPORATION. STAMFORD, CONN, US, vol. 15, no. 4, 1 July 1990 (1990-07-01), pages 219-221, XP000141066 the whole document -----	1-5,9-13
A	DE 198 57 580 A1 (SAMSUNG ELECTRONICS CO. LTD., SUWON) 29 June 2000 (2000-06-29) abstract; figures -----	1-5,9-13
A	US 5 751 464 A (YOSHIKAWA ET AL) 12 May 1998 (1998-05-12) cited in the application abstract; figures -----	1-5,9-13
A	EP 1 248 136 A (SEIKO EPSON CORPORATION) 9 October 2002 (2002-10-09) abstract; figure 5 -----	1-5,9-13

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2005/050970

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-5,9-13

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5,9-13

Projection system comprising a scan angle enlarger having a reflective polarizer with a first and a second portion of perpendicular polarization.

2. claims: 6-8

Projection system having an angular beam separator.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2005/050970

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